

product description

The ammonia sensor uses a professional ammonia concentration sensor probe as the core detection device; it has the characteristics of wide measurement range, high precision, good linearity, good versatility, easy to use, easy to install, long transmission distance, and moderate price.

1.2 Features

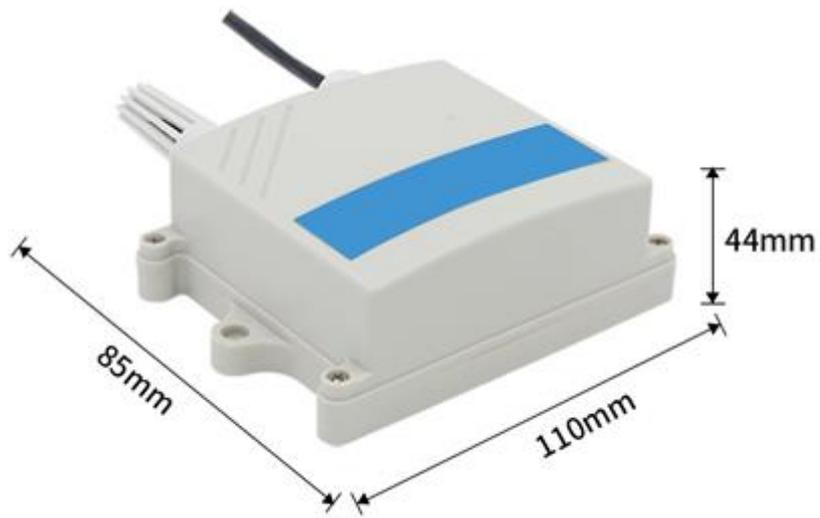
This product uses a high-sensitivity gas detection probe with stable signal and high precision. It has the characteristics of wide measurement range, good linearity, convenient use, easy installation, and long transmission distance.

1.3 Main parameters

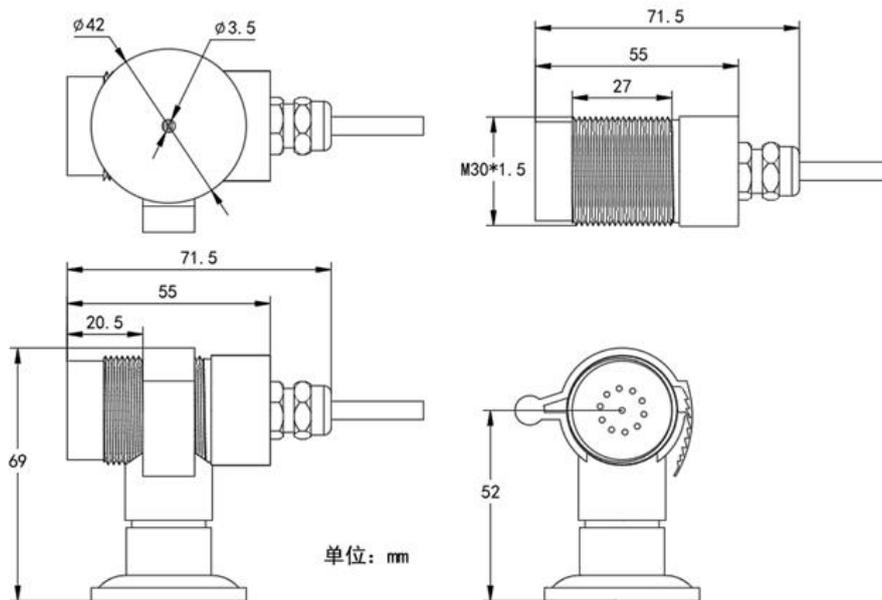
Power supply	10~30V DC (For 0-10V output equipment, only 24V power supply can be used)
output signal	4-20mA\0-5V\0-10V
power consumption	0~50ppm (high precision) 0.12W
	0~100ppm (high precision) 0.12W
	0~500ppm 0.9W
Operating temperature	-20~50°C
Working humidity	15~90%RH non-condensing
pressure range	90~110Kpa
stability	≤2% signal value/month
Response time	50、100ppm ≤90S 500ppm ≤25S
Preheat time	0~50ppm (high precision) ≥5 minutes
	0~100ppm (high precision) ≥5 minutes
	0~500ppm ≥48 hours
Ammonia zero drift (-20~40°C)	0~50ppm (high precision) ≤±2ppm
	0~100ppm (high precision) ≤±2ppm
	0~500ppm ≤±15ppm
repeatability	0~50ppm (high precision) ≤2%
	0~100ppm (high precision) ≤2%
	0~500ppm ≤5%
service life	≥12 months
precision	0~50ppm (high precision) ±8%
	0~100ppm (high precision) ±8%
	0~500ppm: ±5%FS (@100ppm, 25°C, 50%RH) Oxygen content: ≥18%VOL
resolution	0-50ppm: 0.1ppm
	0-100、0-500: 1ppm

All the above specifications and parameters are measured under environmental conditions: temperature 20°C, relative humidity 50%RH, 1 atmosphere, and the maximum concentration of the gas to be measured does not exceed the sensor range.

Product Size:



External probe size:



	thread color	illustrate
electricity source	brown	Positive power supply (10~30V DC)
	black	power negative
lose out	blue	Transmitter signal positive
	green	Transmitter signal negative

Analog parameter meaning

1. Current signal output conversion calculation

For example, the range is 0~100ppm, and the output is 4~20mA. When the output signal is 12mA, calculate the current ammonia concentration. The span of this ammonia range is 100ppm, which is expressed by a 16mA current signal, $100\text{ppm}/16\text{mA}=6.25\text{ppm}/\text{mA}$, that is, a current of 1mA represents an ammonia concentration change of 6.25ppm, and the measured value is $12\text{mA}-4\text{mA}=8\text{mA}$, $8\text{mA}\times 6.25\text{ppm}/\text{mA}=50\text{ppm}$, the current ammonia concentration is 50ppm.

2. Voltage signal output conversion calculation

For example, the range is 0~100ppm, and the output is 0-10V. When the output signal is 5V, the current ammonia concentration value is calculated. The span of this ammonia range is 100ppm, expressed by a 10V voltage signal, $100\text{ppm}/10\text{V}=10\text{ppm}/\text{V}$, that is, a voltage of 1V represents a change in ammonia concentration of 10ppm, and the measured value is $5\text{V}-0\text{V}=5\text{V}$, $5\text{V}\times 10\text{ppm}/\text{V}=50\text{ppm}$, The current ammonia concentration is 50ppm.

3. The conversion relationship between ammonia gas measurement unit ppm and mg/m³

The conversion formula is based on 25°C and 1 atmosphere: $X \text{ ppm} = (Y \text{ mg}/\text{m}^3)(24.45)/(\text{molecular weight})$ or $Y \text{ mg}/\text{m}^3 = (X \text{ ppm})(\text{molecular weight})/24.45$

Only applicable to calculating ammonia (NH₃): $1\text{ppm}=0.70\text{mg}/\text{m}^3$ $1\text{mg}/\text{m}^3=1.44\text{ppm}$